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10/090,613	03/06/2002	Nicholas Justin Sawadsky	033370-005	4976

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Robert E. Krebs
BURNS, DOANE, SWECKER & MATHIS, L.L.P.
P.O. Box 1404
Alexandria, VA 22313-1404

EXAMINER	
LU, KUEN S	

ART UNIT	PAPER NUMBER
2177	

DATE MAILED: 07/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/090,613	SAWADSKY ET AL.	
	Examiner	Art Unit	
	Kuen S Lu	2177	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 March 2002*.

2a)☐ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *1/4-29-2002*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. Claim 23 is objected to because of the following informalities:

The term "and" at the end of limitation b) is ambiguous and should be removed.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 13, 18 and 23 are rejected under U.S.C. 102(e) as anticipated by Kodama (U.S. Patent 6,374,262).

As per claims 1 and 13, Kodama teaches the following:

"peer-to-peer database synchronization between a first computer and a second computer" at Fig. 1 and col. 3, lines 59-67 where databases on a master and a replica machines synchronize each other;

"a) extracting changes from a source database of the first computer to generate an extracted database" at col. 4, lines 11-16 where the replica machine extracts changes to create replica differentials;

"b) transferring the extracted database from the first computer to the second computer" at col. 4, lines 11-16 where the replica machine transfers extracted differentials to the master machine; and

"c) replicating the source database on a target database of the second computer from the extracted database in order to synchronize the target database with the source database" at col. 4, lines 23-27 where the replica differentials are reflected to the master machine database.

As per claims 18 and 23, Kodama teaches the following:

"a plurality of computers in a peer-to-peer network, wherein one of the computers is designated an initiating computer, each computer having a database and software" at Fig. 1, elements 1, 4-4n and col. 3, line 59 – col. 4, line 52 where the master computer is the initiating computer and replica machines 4-4n are a plurality of computers on a peer-to-peer network;

"a) extract changes from a source database of each computer of the users" at at col. 4, lines 11-16 where each of the replica machines extracts changes to create replica differentials;

"b) send changes from each of the user's computers in the peer-to-peer network to the initiating computer" at col. 4, lines 11-16 where each of the the replica machines transfers extracted differentials to the master machine;

"c) replicate the changes from each of the databases of the user's computers onto the database of the initiating computer" at col. 4, lines 23-27 where the replica differentials from each of the replica machines are reflected to the master machine database;

"d) extract all of the changes from the database of the initiating computer" at Fig. 1, element 2 and col. 4, lines 15-23 where master database differentials since last synchronization is extracted;

"e) send the changes to each of the user's computers in the peer-to-peer network" at Fig. 1, element 2 and col. 4, lines 28-38 where master database and replica databases differentials are sent to replica machines; and

"f) replicate the changes on a respective database of each of the users in order to synchronize all databases" at Fig. 1, element 2 and col. 4, lines 31-44 where master and replica differentials are reflected to the replica databases.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 2-3, 5, 7-12, 14-17, 19-22 and 24 are rejected are rejected under U.S.C. 103(a) as being unpatentable over Kodama (U.S. Patent 6,374,262), as applied to claims 1, 13, 18 and 23, and further in view of Nixon et al. (U.S. Patent 6,704,737, hereafter "Nixon").

As per claims 2 and 14, Kodama teaches extracting changes from a source database (col. 4, lines 11-16) where the replica machine extracts changes to create replica differentials as previously described for rejecting claims 1 and 13.

Kodama does not specifically teach "compressing the extracted database to generate a compressed extracted database".

However, Nixon teaches zipping the export file and transferring the zipped export file to the node with the master database. At the master database, an application may unzip the export file, import this file into the master database in any known or desired manner at col. 13, lines 41-55.

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to combine Nixon's reference with Kodama's by compressing (zipping) the extracted database before transferring the zipped file(s) to another computer because by doing so the bandwidth needed for file transfer would be much less. This practice would have improved the network and system performance for Kodama's system because transferring files on the network is a common and frequent routine.

Nixon further teaches "decompressing the compressed extracted database on the second computer to generate a decompressed extracted database" at col. 13, lines 41-55 by zipping the export file and transferring the zipped export file to the node with the master database. At the master database, an application may unzip the export file, import this file into the master database in any known or desired manner.

As per claim 3, Nixon further teaches "expunging the extracted database from the first computer after the compressed extracted database is generated" by zipping the export file at col. 13, lines 41-55 where zipping process will erase the original unzipped file after the file being successfully zipped.

As per claim 5, Nixon further teaches "expunging the extracted database on the second computer after the decompressed database has been generated" at col. 13, lines 41-55 where unzipping process will erase the original zipped file after the file being successfully unzipped.

As per claims 7 and 15, Nixon further teaches "the compressed extracted database is transferred over a peer-to-peer network between the first computer and the second computer" at col. 13, lines 41-55 by zipping the export file and transferring the zipped export file to the node with the master database. .

As per claims 8 and 16, Nixon further teaches "the peer-to-peer network is a wireless network" at col. 3, lines 20-25 by using wireless links or dedicated Ethernet bus to communicate sites.

As per claims 9 and 17, Nixon further teaches "the peer-to-peer network is a wired network" at col. 3, lines 20-25 by using wireless links or dedicated Ethernet bus to communicate sites.

As per claim 10, Nixon further teaches "the compressed extracted database is decompressed in a manner complementary to the compression of step (1)" at col. 13, lines 41-55 by zipping the export file and transferring the zipped export file to the node with the master database. At the master database, an application may unzip the export file, import this file into the master database in any known or desired manner.

As per claim 11, Nixon further teaches "d) extracting changes from the target database of the target computer to generate an extracted target database;

e) transferring the extracted target database from the second computer to the first computer; and f) replicating the target database on the source database of the first computer from the extracted target database in order to synchronize the source database with the target database" at col. 13, lines 41-55 by synchronizing the entire database by exporting the reserved items from the database, zipping the export file and transferring the zipped export file to the node with the master database. At the master database, an application may unzip the export file, import this file into the master database in any known or desired manner by including every item from database for synchronizing the whole database.

As per claim 12, Nixon further teaches "1) compressing the extracted target database to generate a compressed extracted target database subsequent to step (d); and 2) decompressing the compressed extracted target database on the first computer to generate a decompressed target database subsequent to step (e)" at col. 13, lines 41-55 by synchronizing the entire database by exporting the reserved items from the database, zipping the export file and transferring the zipped export file to the node with the master database. At the master database, an application may unzip the export file, import this file into the master database in any known or desired manner by including every item from database for synchronizing the whole database.

As per claim 19, Nixon further teaches "compressing the changes prior to sending them and decompressing the changes after being received" at col. 13, lines 41-55 by zipping the export file and transferring the zipped export file to the node with the

master database. At the master database, an application may unzip the export file, import this file into the master database in any known or desired manner.

As per claim 20, Nixon further teaches the following:

"step (a) further comprises creating a transferred database from the changes to each respective database of the users" at col. 13, lines 41-55 by zipping the export file and transferring the zipped export file to the node with the master database. At the master database, an application may unzip the export file, import this file into the master database in any known or desired manner where the file transferred is the transferred database;

"step (b) further comprises compressing and sending the transferred database as the changes to the initiating user" at col. 13, lines 41-55 by zipping the export file and transferring the zipped export file to the node with the master database. At the master database, an application may unzip the export file, import this file into the master database in any known or desired manner where the file transferred is the transferred database; and

"step (c) further comprises decompressing the transferred database in order to replicate the changes to the database of the initiating user" at col. 13, lines 41-55 by zipping the export file and transferring the zipped export file to the node with the master database. At the master database, an application may unzip the export file, import this file into the master database in any known or desired manner where the file transferred is the transferred database.

As per claim 21, Nixon further teaches the following:

"step (d) further comprises creating a transferred database from the changes to the database of the initiating user and then compressing and sending the transferred database as the changes to each of the databases of each of the users; and step (e) further comprises decompressing the transferred database by each of the users in order to replicate the changes of all the users on each of the user's databases" at col. 13, lines 41-55 by zipping the export file and transferring the zipped export file to the node with the master database. At the master database, an application may unzip the export file, import this file into the master database in any known or desired manner where the file expored is the transferred database at the master (initiating) machine and the unzipped transferred file at the replica machines is the transferred database at the replica machines.

As per claims 22 and 24, Nixon further teaches "the changes are transferred in parallel to each of the users" at Fig. 2, col. 4, lines 53-65 and col.2, lines 48-51 where replicas machines are connected to the master machine for exchanging data when the replica machines are connected at an arbitrary time.

4. Claims 4 and 6 are rejected are rejected under U.S.C. 103(a) as being unpatentable over Kodama (U.S. Patent 6,374,262) in view of Nixon et al. (U.S. Patent 6,704,737, hereafter "Nixon"), as applied to claims 2, and further in view of Lisiecki et al. (U.S. Publication 2002/0147774, hereafter "Lisiecki").

As per claim 4, the combined Nixon-Kodama teaches compressing and decompressing extracted database differentials as previously described in claim 2 rejection.

The combined reference does not teach expunging the compressed extracted database from the first computer after the transferring from the first computer to the second computer.

However, Lisiecki teaches acknowledgement of receiving of log entries at the remote site, and purging the entries by 'garbage collected' at col. 10, [0106], lines 12-15.

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to combine Lisiecki's reference with Nixon and Kodama's by combining the following steps as an integrated process of database replication or synchronization: extracting database into file, zipping the file (and optionally removing its original unzipped file automatically), transferring file to remote site, unzipping the file (and optionally removing the original zipped file automatically) at the remote site, importing the file into remote database, and purging the zipped or unzipped file at the remote or current site should it continues to exits. This practice would have improved the network and system performance for Kodama's because a much narrower network bandwidth is needed for transferring file and the use of storage is efficient since it is constantly purged.

As per claim 6, Lisiecki further teaches "expunging the decompressed database on the second computer after it has been replicated on the target database" at col. 10, [0106], lines 12-15 by the acknowledgement of receiving of log entries at the remote site, and purging the entries by 'garbage collected'.

Conclusions

5. The prior art made of record

A. U.S. Patent No. 6,374,262

B. U.S. Patent No. 6,704,737

C. U.S. Publication 2002/0147774

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

D. U.S. Publication 2002/0073109

E. U.S. Publication 2003/0084361

F. U.S. Patent No. 6,202,085

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kuen S Lu whose telephone number is 703-305-4894. The examiner can normally be reached on 8 AM to 5 PM, Monday through Friday. If at tempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached on 703-305-9790. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Kuen S. Lu
Patent Examiner
July 7, 2004

Jean R. Homere, Esquire
Primary Examiner
July 7, 2004

JEAN R. HOMERE
PRIMARY EXAMINER